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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,975	02/14/2002	Chia-hung Chen	5657	9230

7590

02/13/2004

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EXAMINER

LIN, ING HOUR

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/075,975		CHEN ET AL.	
	Examiner		Art Unit	
	Ing-Hour Lin		1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 0214.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0205</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1725

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 17, is "a round" a typo of --around--?

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al in view of Heitz et al.

Wagner et al (col. 11, lines 42+) teach the claimed polyisocyanate composition which contains the claimed N,N'-carbodiimide groups and which is stable in storage, wherein the wt%

Art Unit: 1725

of carbodiimide in the polyisocyanate composition (mixture) is 0.5 – 3. Wagner et al fail to teach the use of monomeric carbodiimide.

However, Heitz et al (col. 2, lines 51+) teach the use of monomeric carbodiimide for the purpose of enhancing the hydrolysis resistance of the composition. It would have been obvious to one having ordinary skill in the art to provide Wagner et al the use of monomeric carbodiimide as taught by Heitz et al in order to enhance the hydrolysis resistance of the composition.

5. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al in view of Heitz et al and further in view of Shah.

Wagner et al in view of Heitz et al fails to teach the use of diphenylmethylene diisocyanate (MDI).

However, Shah (col. 5, lines 39+) teaches the use of diphenylmethylene diisocyanate (MDI) for the purpose of meeting the mutual compatibility with carbodiimide and improving the mechanical property of the composition. It would have been obvious to one having ordinary skill in the art to provide Wagner et al in view of Heitz et al the use of diphenylmethylene diisocyanate (MDI as taught Shah in order to meet the mutual compatibility with carbodiimide and improve the mechanical property of the composition.

6. Claims 5-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skoglund in view of Wagner et al and further in view of Heitz et al.

Skoglund (col. 2, lines 25+) teaches a polyurethane-forming foundry binder system, comprising a phenolic resin component and a polyisocyanate component, where the polyisocyanate component contains an ortho ester. The invention also relates to foundry mixes

Art Unit: 1725

prepared from the binder and an aggregate, as well as foundry shapes prepared by the no-bake and cold-box processes. The foundry shapes are used to make metal castings. Skoglund fails to teach the use of monomeric carbodiimide in the claimed polyisocyanate component.

However, Wagner et al in view of Heitz et al teach the claimed monomeric carbodiimide in the claimed polyisocyanate, the claimed N,N'-carbodiimide groups and the wt% of carbodiimide in the polyisocyanate composition (mixture) is 0.5 – 3 in paragraph 4 for the purpose of improving hydrolysis and mechanical property of polyisocyanate composition. It would have been obvious to one having ordinary skill in the art to provide Skoglund the use of monomeric carbodiimide as taught by Wagner et al and Heitz et al in order to enhance the hydrolysis resistance and mechanical property of the polyisocyanate composition, foundry binder system, foundry mixes and shapes.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ing-Hour Lin whose telephone number is (571) 272-1180. The examiner can normally be reached on M-F (8:00-5:30) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

J.R.K.
I-H.L
02-06-04

Kiley Stoner AU 1725
Kiley Stoner 2/19/04